

MTT-S/AP-S EMCS Joint Chapter Hyderabad Section



Office Bearers 2022



Dr. Sandeep Chaturvedi
Chair



Dr. Prashant Mishra
Vice Chair



Dr. Sulakshana Chilukuri
Secretary



Dr. Runa Kumari
Treasurer

Membership Statistics (as on 11.12.2022)

Select OU of your Volunteer Role

Hyderabad Section Jt Chapter, AP03/MTT17...

Region

R10

Grade

(All)

IEEE Status

Active

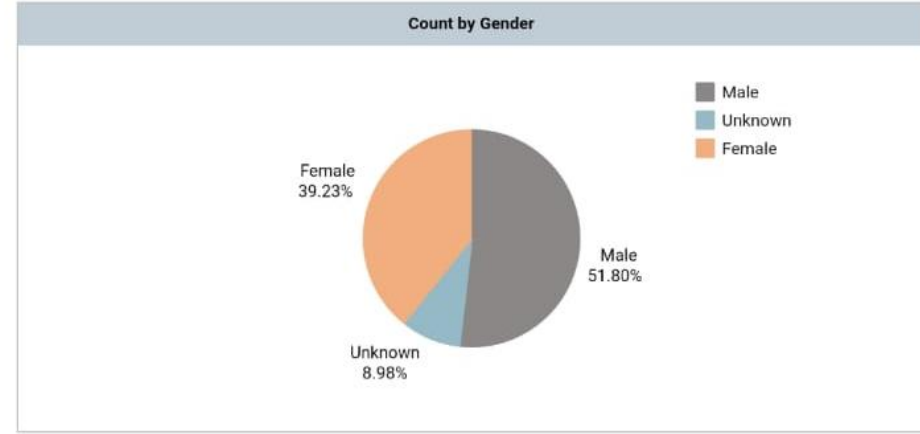
HKN Member

(All)

Count by Region and Grade

Region	Council	Section	Grade Category	Grade	Total
R10	India Council	Hyderabad Section	IEEE Grades	Associate Member	1
				Graduate Student Member	53
				Life Fellow	1
				Life Senior	2
				Member	110
				Senior Member	42
				Student Member	513
				Total	722
				Other Grades	Affiliate
			Total	1	
			Total	723	
	Vizag Bay Section	IEEE Grades	Student Member	1	
			Total	1	

Count by Gender



Total membership: 721

Professional Members(M,SM,LSM,LF,F): 155

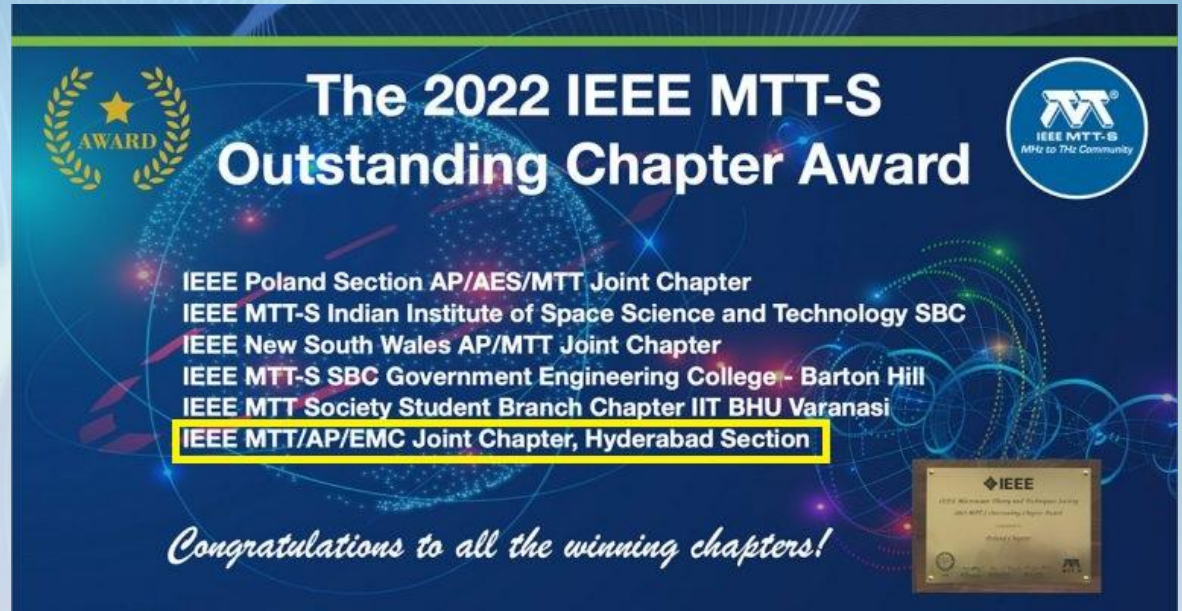
Student & graduate Student Members: 566

Student Chapter: 10

Female member %: 39.23

Achievements-2021

- Received 2022 IEEE MTT-S Outstanding Chapter Award (for activities carried out during Jan-Dec 2021)
- Nominated for Best Chapter award of IEEE Hyderabad Section for the year 2021



Chapter Activities during 2022 Summary

Total # Activities in 2022	# Technical Activities	# Non-Technical Activities
19	16 (3 In-person)	3 (1 in-person)

Chapter Activities during 2022

Activity: Chapter Execom Meeting (Virtual)

Date: January 16, 2022

Attendance: 7

Activity: EMCS Distinguished Lecture

Topic: Reverberation Chambers

Date: 20th February 2022

Speaker: Mr. Garth D'Abreu, ETS Lindgren, USA

Attendance: 36

Chapter Activities during 2022

Activity: Technical Expert Lecture (Webinar)

Topic: Maxwell's theory for Us: regular folks & Aethreal waves make history: The four scientists who saved James Maxwell's theories

Speaker: Dr. James Rautio, Board Chair, Sonnet Software Inc.

Date: February 26-27, 2022

Attendance: 47

Activity: MTT-S Distinguished Lecture (Webinar)

Topic: Distributed Phased Arrays: Challenges and recent Progress

Date: 12th March 2022

Speaker: Prof. Jeffrey Nanzer, Michigan State University, USA

Attendance: 70

Chapter Activities during 2022

Activity: Technical Expert Lecture (Webinar)

Topic: Linearizers101: Art of quietening the Communication Power amplifiers

Speaker: Prof Allen Katz, The College of New Jersey, USA and Founder, LINTECH USA

Date: February 26th March, 2022

Attendance: 29

Activity: EMCS Distinguished Lecture (Webinar)

Topic: Unintentional Antennas

Speaker: Ms. Karen Burnham, Principal Scientist, Electromagnetic Applications Inc, USA

Date: 9th April, 2022

Attendance: 72

Chapter Activities during 2022

Activity: AP-S Distinguished Lecture

Topic: Antenna Technologies for 21st Century Satellite and Ground Communications

Date: 2nd May 2022

Venue: Osmania University ECE auditorium

Speaker: Dr. Sudhakar Rao, Senior Technical Fellow, Northrop Grumman Space Systems, USA

Attendance: 62

Activity: Chapter Execom Interaction With MTT-S MGA Chair Dr. Gautam Chattopadhyay (Virtual)

Date: June 4th, 2022

Attendance: 5

Chapter Activities during 2022

Activity: MTT-S Distinguished Microwave Lecture (Webinar)

Topic: Fundamentals of RF and MMWAVE Power Amplifier Designs

Speaker: Prof Hua Wang, ETH, Zurich, Switzerland.

Date: 9th June, 2022

Attendance: 63

Activity: AP-S YP Ambassador talk

Topic: Flat panel Antennas for satellite communication on the move

Date: 12th June 2022

Speaker: Dr Miguel Ferrando-Rocher, University of alicante, Spain

Attendance:43

Chapter Activities during 2022

Activity: MTT-S Expert Lecture (Webinar)

Topic: Enabling Integrated Circuit Technologies for Next Generation Satcom Internet connectivity

Speaker: Dr. Tumay Kanar, Renesas, USA

Date: 9th July, 2022

Attendance: 38

Activity: MTT-S Distinguished Microwave Lecture (Webinar)

Topic: Antenna Booster Technology: from Fundamentals to Applications

Speaker: Prof Jaume Anguera, Univerity of Barsezona.

Date: 19th Nov, 2022

Attendance: 37

Chapter Activities during 2022

Activity: MTT-S Distinguished Microwave Lecture (Webinar)

Topic: Multi function Multi band Reconfigurable High Q filters

Speaker: Prof Raafat Monsour.

Date: 23rd July, 2022

Attendance: 39

Activity: MTT-S Expert Lecture (Webinar)

Topic: How we changed the world with Silicon Based Phased Arrays

Speaker: Prof Gabriel Rebeiz

Date: 24th September, 2022

Attendance: 65

Chapter Activities during 2022

Activity: JC Bose Memorial Lecture (Hybrid)

Topic: 1. Understanding Synthetic Aperture Radar Technology

2. Silicon Based Millimeter wave Phased Arrays: Fundamentals to Applications

Speaker: 1. Dr. Tapan Misra, Ex-Director, SAC-ISRO.

2. Dr. Bodhisatwa Sadhu, IBM TJ Watson Research Center, USA

Date: 3rd Dec, 2022

Attendance: 40

Activity: INDUSTRY EXPERT TALK ON " " (In-person)

Topic: RF & microwave applications in aerospace & Defence: challenges and opportunities

Speaker: Dr. Charlotte Blair, Ansys Inc. USA

Date: 9th Dec, 2022

Attendance: 60

Future Chapter Activities

- AP-S COPE workshop for rural school Children (tentatively planned in Oct 2022)
- MTT SBC Meetup (Oct/Nov)
- Hands on RF measurement workshop (Oct/Nov)
- Hands on Design, Build & Measure workshop on Antennas and Microwave components (Nov/Dec)
- More DL talks by MTT,AP,EMCS Distinguished Speakers (5-6 talks are scheduled in July-Dec timeframe, out of which one would be physical DL)

Hyderabad section MTT SBC Activities

Activities by MTT Hyderabad SBCs During 2022

MJCET MTT SBC:

-MTT-S Distinguished Lecture by Dr. Changzi Li, in collaboration with NIT Silchar and IIT Kharagpur

Date : 13th February 2022

-MTT-S Distinguished Lecture by Dr. Jasmine Grossinger in collaboration with NIT Silchar

Date: 15th March 2022

Matrusri MTT SBC:

-MTT-S Distinguished Lecture by Dr. Changzi Li, in collaboration with NIT Silchar

Date : 27th April, 2022

-1 Week Workshop on THz Technologies (28th Nov. 3rd Dec 2022)

NITW MTT SBC:

-MTT-S Distinguished Lecture by Dr. Changzi Li, in collaboration with MTT-S Bombay Section

Date : 23rd Mar, 2022

Activities by MTT Hyderabad SBCs During 2022

VNRVJIET MTT SBC:

MTT SBC Inauguration and Panel Discussion on “Clearing the air on 5G interference on avionics safety and impediments in 5G implementation”

Attendance: 175

KLEF Vijaywada MTT SBC:

GPREC Kurnool MTT SBC:

Osmania University MTT SBC:

Vardhamaan College of Engineering MTT SBC:

EMCS DL Talk by Mr. Garth D'Abreu



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter

Speaker



EMC-S Distinguished Lecture (Webinar)

On

Reverberation Chambers

Mr. Garth D'Abreu

Director, Automotive Solutions,
ETS-Lindgren, Texas, USA

6 20th February, 2022 (Sun)

06:00PM – 08:00 PM (IST)

Link for registration: <https://bit.ly/3LtzKKt>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE Vardhaman
MTT SBC

IEEE OUCE
MTT SBC

IEEE GPREC
MTT SBC

IEEE MJCET
MTT SBC

IEEE NITW
MTT SBC

IEEE KLU
MTT SBC

IEEE VNR VJIT
MTT SBC

MTT-S Expert Lecture by Dr. James Rautio



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter

Speaker



Dr. James C. Rautio

Board Chair,
Sonnet Software, Inc., USA

MTT-S Distinguished Lecture (Webinar)

On

Maxwell's theory for regular Folks

and

Æthereal Waves Make History

The four scientists who saved James Clerk Maxwell's theories

6 26th -27th February, 2022 (Sat-Sun)

06:30PM – 08:00 PM (IST)

Link for registration: <https://bit.ly/33pXIVK>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE Vardhaman
MTT SBC

IEEE OUCE
MTT SBC

IEEE GPREC
MTT SBC

IEEE MJCET
MTT SBC

IEEE NITW
MTT SBC

IEEE KLU
MTT SBC

IEEE VNR VJIEET
MTT SBC

DML Talk by Prof. Jeffrey Nanzer



IEEE Hyderabad Section
MTT-S/AP-S/EMC-S Joint Chapter

Speaker

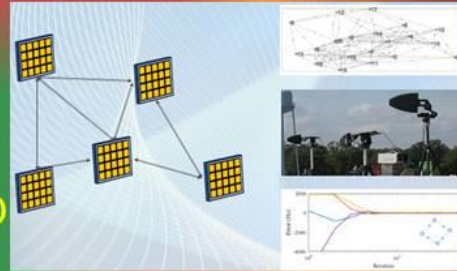
MTT-S Distinguished Lecture
(Webinar)

On

DISTRIBUTED PHASED
ARRAYS: CHALLENGES AND
RECENT PROGRESS



Prof. Jeffrey Nanzer
Michigan State University, USA



6 Date: 12th March, 2022 (Sat)

06:30PM – 08:00 PM (IST)

Link for registration: <https://bit.ly/35AfSog>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE Vardhaman
MTT SBC

IEEE OUCE
MTT SBC

IEEE GPREC
MTT SBC

IEEE MJCET
MTT SBC

IEEE NITW
MTT SBC

IEEE KLU
MTT SBC

IEEE VNR VJIT
MTT SBC

MTT-S Expert Lecture by Dr. Allen Katz



IEEE Hyderabad Section
MTT-S/AP-S/EMC-S Joint Chapter

Expert Lecture (Webinar)

On

Linearizers 101:
Art of quietening the
communication Power Amplifiers

Speaker



Dr. Allen Katz

Professor of ECE, The College of New
Jersey

President, Linearizer Technology Inc., USA

6 Date: 26th March, 2022 (Sat)



06:30PM – 08:00 PM (IST)

Link for registration: <https://bit.ly/3lxJMlo>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE Vardhaman
MTT SBC

IEEE OUCE
MTT SBC

IEEE GPREC
MTT SBC

IEEE MJCET
MTT SBC

IEEE NITW
MTT SBC

IEEE KLU
MTT SBC

IEEE VNR VJIT
MTT SBC

EMCS DL Talk By Ms. Karen Burnham



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter

presents

Speaker



Ms. Karen Burnham

Principal Scientist,
Electromagnetic Applications Inc,
Denver, CO, USA

EMC-S Distinguished Lecture (Webinar)

On

Unintentional Antennas



9thth April, 2022 (Sat)



06:30PM – 08:00 PM (IST)

Link for registration: <https://bit.ly/3609t6w>

Event Supported by: IEEE EMC Society Distinguished Lecture Program

AP-S DL Talk by Dr. Sudhakar Rao



IEEE MTT-S/ AP-S/ EMC-S Joint Chapter, Hyderabad Section

AP-S Distinguished Lecture on

ANTENNA TECHNOLOGIES FOR 21st CENTURY SATELLITE AND GROUND COMMUNICATIONS

SPEAKER



DR. SUDHAKAR RAO
Senior Technical Fellow,
Northrop Grumman Space Systems, USA

DATE AND VENUE:
02 MAY, 2022
5:30 PM - 7:30 PM
ECE DEPARTMENT AUDITORIUM, OSMANIA UNIVERSITY.

Event Supported by: IEEE AP Society Distinguished Lecture Program
Supporting Student Branch: Osmania University MTT SBC



SCAN TO REGISTER



MTT-S DML Talk by Prof. Hua Wang



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter

Speaker



MTT-S Distinguished Microwave Lecture
(Webinar)

On

**FUNDAMENTALS OF RF AND MM-
WAVE POWER AMPLIFIER DESIGNS**

Dr. Hua wang
Professor,
ETH Zürich, Switzerland



9th June, 2022 (Thu)



07:00PM – 8:30 PM (IST)

Link for registration: <https://bit.ly/3NdPiIT>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE OUCE
MTT SBC

IEEE Vardhman
MTT SBC

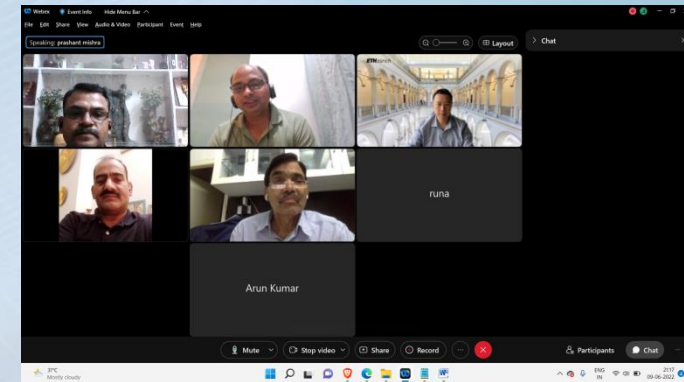
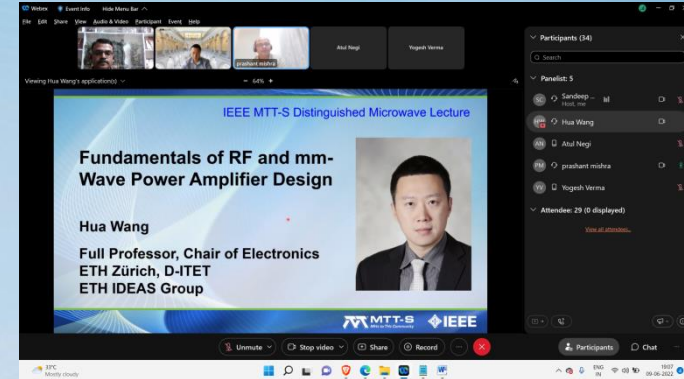
IEEE GPREC
MTT SBC

IEEE MJCET
MTT SBC

IEEE NITW
MTT SBC

IEEE VNRVIET
MTT SBC

IEEE KLU
MTT SBC



AP-S YP Ambassador Talk by Dr. Miguel Ferrando-Rocher



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter

Speaker

AP-S YP Ambassador Lecture (Webinar)

On



Flat panel antennas for satellite communications on the move

Dr. Miguel Ferrando Rocher

Assistant Professor
University of Alicante, Spain

12

12th June, 2022 (Sun)



07:00PM – 8:30 PM (IST)

Link for registration: <https://bit.ly/3zpMr5s>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE OUCE
MTT SBC

IEEE Vardhman
MTT SBC

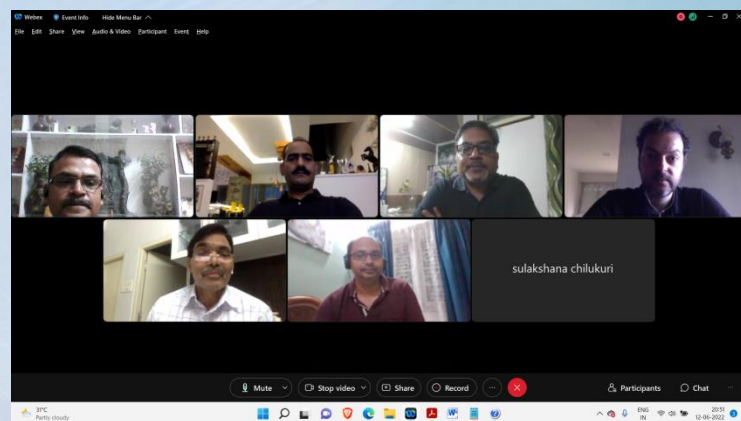
IEEE GPREC
MTT SBC

IEEE MICET
MTT SBC

IEEE NITW
MTT SBC

IEEE VNRVIJET
MTT SBC

IEEE KLU
MTT SBC



Expert Lecture by Dr. Tumay Kanar



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter

Speaker

MTT-S Expert Lecture (Webinar)

On



Enabling Integrated Circuit Technologies for Next Generation Satcom Internet connectivity

Dr. Tumay Kanar

Sr. Manager, mm-wave IC
design & Product marketing
Renesas Electronics, CA, USA



9th July, 2022 (Sat)



10:00AM – 11:30 AM (IST)

Link for registration: <https://bit.ly/3yxFOgj>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE OUCE
MTT SBC

IEEE Vardhman
MTT SBC

IEEE GPREC
MTT SBC

IEEE MJCET
MTT SBC

IEEE NITW
MTT SBC

IEEE VNRVIET
MTT SBC

IEEE KLU
MTT SBC

MTT-S DML Talk by Prof. Raafat Mansour



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter

MTT-S Distinguished Microwave Lecture
(Webinar)

On

MULTI-FUNCTION MULTI-BAND
RECONFIGURABLE HIGH-Q FILTERS



Speaker

Dr. Raafat Mansour

Professor, Electrical &
Computer Engineering
University of Waterloo, Canada



23rd July, 2022 (Sat)



07:00PM – 8:30 PM (IST)

Link for registration: <https://bit.ly/3y6XfEi>

Supporting Student
Branch Chapters

IEEE MEC
MTT SBC

IEEE OUCE
MTT SBC

IEEE Vardhman
MTT SBC

IEEE GPREC
MTT SBC

IEEE MJCET
MTT SBC

IEEE NITW
MTT SBC

IEEE VNRVIET
MTT SBC

IEEE KLU
MTT SBC

Expert Talk by Prof. Gabriel Rebeiz

IEEE MTT-S/AP-S/EMC-S Webinar

HOW WE CHANGED THE WORLD USING SILICON BASED PHASED ARRAYS

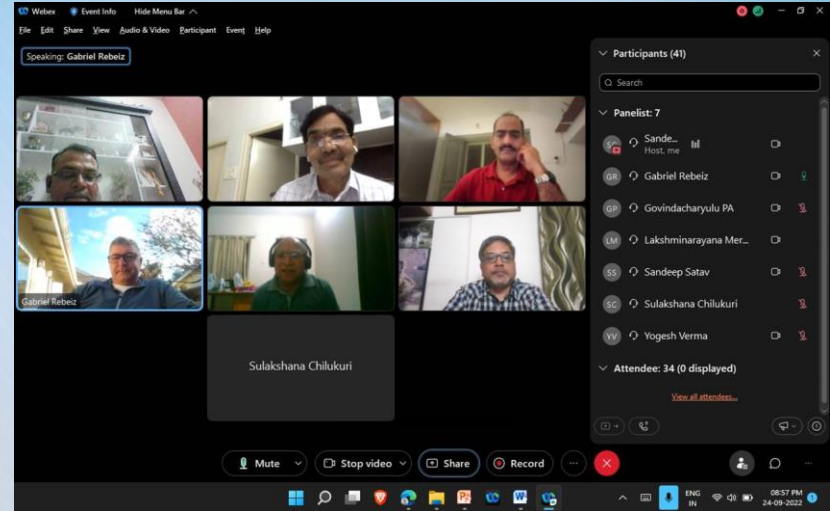
Prof. Gabriel M. Rebeiz

University of California, San Diego, USA



Saturday, 24th September 2022
7:30 PM – 9:00 PM
(India Standard Time)

Register



Expert Lecture by Prof. Jaume Anguera



IEEE Hyderabad Section

MTT-S/AP-S/EMC-S Joint Chapter MTT-S Expert Lecture (Webinar)

On



Speaker

Antenna Booster Technology: from Fundamentals to Applications

Dr. Jaume Anguera

Associate Professor, Universitat
Ramon Llull, Barcelona, Spain
Founder and CTO Ignion

19 19th Nov, 2022 (Sat)

06:30PM – 8:30 PM (IST)

Link for registration: <https://bit.ly/3tpYcEA>

Supporting Student Branch Chapters

IEEE MEC MTT SBC	IEEE OUCE MTT SBC	IEEE Vardhman MTT SBC	IEEE GPREC MTT SBC	IEEE MJCET MTT SBC	IEEE NITW MTT SBC	IEEE VNRVJiet MTT SBC	IEEE KLU MTT SBC	IEEE VITAP MTT SBC	IEEE BVRITM MTT SBC
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The slide shows a diagram of an antenna booster system. It features a central antenna component connected to various communication protocols: NB-IoT, WiFi, 5G, 4G, LTE-M, LoRa, Zigbee, and Bluetooth. A red box highlights the text: "One antenna Any band Any device". A red circle notes: "Frequency is selected by the RECEIVER, not by the antenna component". A red arrow points to the antenna with the text: "Use the same antenna in every device, regardless of the form factor. Change platform by just changing the matching network." Another red arrow points to the protocols with the text: "Use the same antenna for every frequency band, even for multiple of them all together (multiband design). Change protocol and frequency by just changing the matching network."

The screenshot shows a Zoom meeting in progress. Three participants are visible in a grid view. The top-left participant is a man with glasses and a mustache. The top-right participant is a man with a mustache. The bottom-center participant is Dr. Jaume Anguera, the speaker. The Zoom interface includes controls for Mute, Stop video, Share, and Record.



12th JC Bose Memorial Lecture

IEEE Hyderabad Section



IEEE HYDERABAD SECTION AND MTT-S/AP-S/EMC-S
JOINT CHAPTER



12th J C Bose Memorial Lecture

TALK 1 : UNDERSTANDING SYNTHETIC
APERTURE RADAR

TALK 2 : SILICON-BASED MILLIMETER-WAVE PHASED ARRAYS
FOR 5G: FUNDAMENTALS TO FUTURE TRENDS

By



Dr. Tapan Misra
Former Director, SAC-ISRO
Ahmedabad &
Founder SISIR Radar PVT LTD

10:00 AM - 11:30 AM

Date : 3rd Dec 2022 (Saturday)

By



Dr. Bodhisatwa Sadhu
Senior Research Scientist
IBM T.J. Watson Research Center
NY, USA

11:30 AM - 01:00 PM

Venue : The Plaza Hotel, Begumpet



Industry Expert Talk by Dr. Charlotte Blair

IEEE Hyderabad Section



Ansys

RF & Microwave Applications in Aerospace & Defence: Challenges and Opportunities

Date: December 09, 2022 (Friday)

Time: 17:30 to 19:30 IST

Venue: Hotel Shubham Prestige - Karmanghat Plot no 6, 7/8, Nirmalanagar Colony, Sri Hanuman Nagar Colony, Hanuman Nagar, Karmanghat, Telangana 500079



In the area of Communication and Radar, aerospace and defence technologies have been years ahead of other industries and common applications. **Operational requirements along with mitigations towards interference and jamming make the system more complicated** and it is often made difficult to meet the **stringent MIL standards**. Reliable operations of Communication and Radar system **require high-quality RF components and Antenna modules along with Digital Front End systems**. Design and development of such systems in a short span of time is always a challenge to designers. Even with MIL-qualified components, the system often fails while integrating with vehicles such as **drones, defence UAVs, aircrafts, missiles, satellites**, etc. Another set of challenges arises while conducting the flight test and identifying the reason for **communication blackout or abnormality in the performance**.

Ansyes offers a set of tools that can help designers to **develop and validate the product virtually** before going for expensive prototype testing. **Using Digital mission engineering**, the system integrator can validate its performance over the mission goal without over-the-air testing (communication link, Radar detections, EOD, etc). Ansys enables a program acceleration of **six, with 30% improvement on maintenance cycle-times and acquisition labour efficiency**.

The event will address some of the **key challenges and opportunities** in the field of electromagnetics for Aerospace and Defence. It will bring together some of the most **distinguished scientists, technologists, and leaders** from this domain. The event will also showcase **different case studies in this sector specific to RF and Microwave applications**. Attendees will also get a chance to interact with the esteemed speakers and fellow experts.

Invited Expert



Charlotte Blair, Ph.D. is a Technical Support Manager for ANSYS Inc. She received her BS in Electrical Engineering at Rutgers-College of Engineering and her MS and Ph.D. in Electrical Engineering from New Jersey Institute of Technology. She has supported electromagnetics simulations using industry known tools for over fifteen years. Her real world experience extends from the design of laser diode transmit modules for Lytel/Lockheed to design of filters for wireless communications applications at Celwave/RFSS. She is a professional, self-motivated team player committed to excellence with hands-on RF, microwave, and laser-optic experience; strong field service, customer service, project management and communication skills.

With Maryam Rahmani, Charlotte served as the Technical Co-Chair for the 2016 and 2017 IEEE R1 & R2 Women in Engineering (WIE) Forum East and as Conference Chair in 2018. Charlotte also serves as the IEEE Connecticut Section Chair for the local Microwave Theory and Techniques Society (MTT-S) and WIE Chapter as well as the IEEE Region 1 Women in Engineering Chair.

With Maryam Rahmani, Charlotte served as the Technical Co-Chair for the 2016 and 2017 IEEE R1 & R2 Women in Engineering (WIE) Forum East and as Conference Chair in 2018. Charlotte also serves as the IEEE Connecticut Section Chair for the local Microwave Theory and Techniques Society (MTT-S) and WIE Chapter as well as the IEEE Region 1 Women in Engineering Chair.



VNRVJIET MTT SBC Inauguration and Panel Discussion on “Clearing the air on 5G interference on avionics safety and impediments in 5G implementation”



*IEEE VNRVJIET SB welcomes you all to the
Inauguration of IEEE MTTS- VNRVJIET and
Panel Discussion on*

**“Clearing the air on 5G interference on Aviation Safety and
Impediments in 5G implementation”**

Scan & join

5 Feb, 2022 **11:00 AM** **Student Coordinator**
Vinay - 6304576580



Panel Members **Moderators**

 Mr. Sandeep Chaturvedi Deputy General Manager at CAETEC, Chapter Chair MTTS/APS/EMCS Joint Chapter, IEEE Hyderabad Section	 Mr. Nishant Tiwari Solution architect for OAS Product Development and domain consultant for radio intelligent controller, ICS	 Mr. Subhash Mondal Head Of Research And Development - 5G Products at HFCL	 Ms. K.B.Archana Sr. Asst. Professor, Dept of ECE VNRVJIET	 Ms. D. Kanthi Sudha Asst. Professor, Dept of ECE, VNRVJIET and Faculty advisor MTT	 Dr. K. Kalyana Srinivas Asst. Professor, Dept of ECE, VNRVJIET and Faculty advisor MTT.
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GMeet Link
meet.google.com/scv-xefb-mfi

 [/ieeevnrvjiet](https://www.facebook.com/ieeevnrvjiet)

Future Plans

Setting up Microwave Experience Labs in all the associated Student Branch Chapters

Setting up RF& Microwave Skill Development Centre (Comprising of Simulation, Fabrication and Measurement facilities)

Initiating inter-chapter meet-ups (meet up moves from one chapter to another once every month, may be 2nd Sunday of every month)

Stepping of SIGHT/COPE/STEM activities to cover more rural/remote places of Telangana/Andhra Pradesh